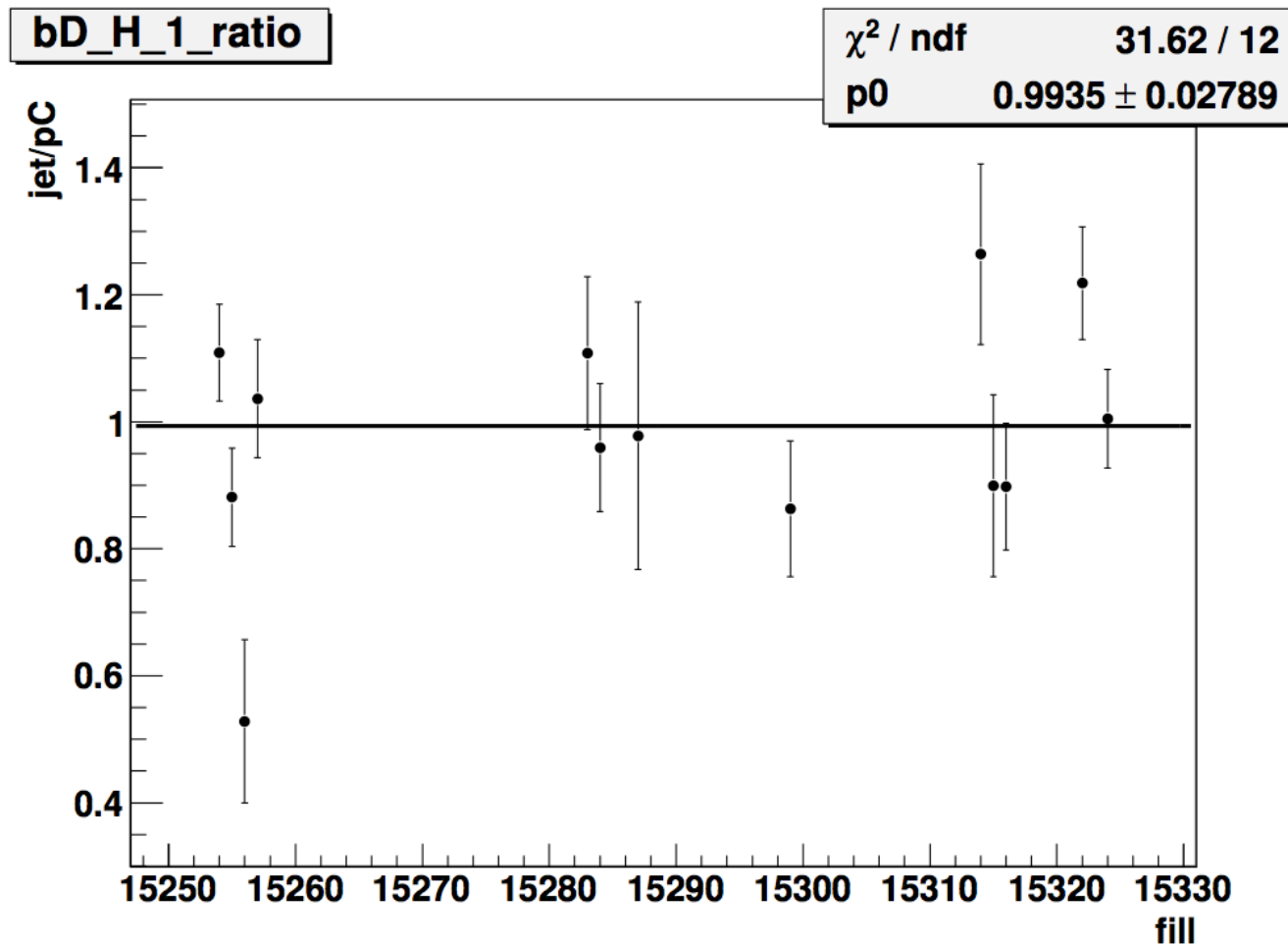


# $A_N$ etc. per pC target

polar. meeting  
17.08.11

- We normalize carbon polarimeter: pC/H-jet
- So far normalization done each pC polar.: BUp, BDn, YUp, YDn  
mean per fill:  $\langle \text{pC} \rangle_{\text{fill}} / \langle \text{H-jet} \rangle_{\text{fill}}$
- Can break down further: normalize for each target
- Alan has done; e.g. for BDn Horizontal target 1:

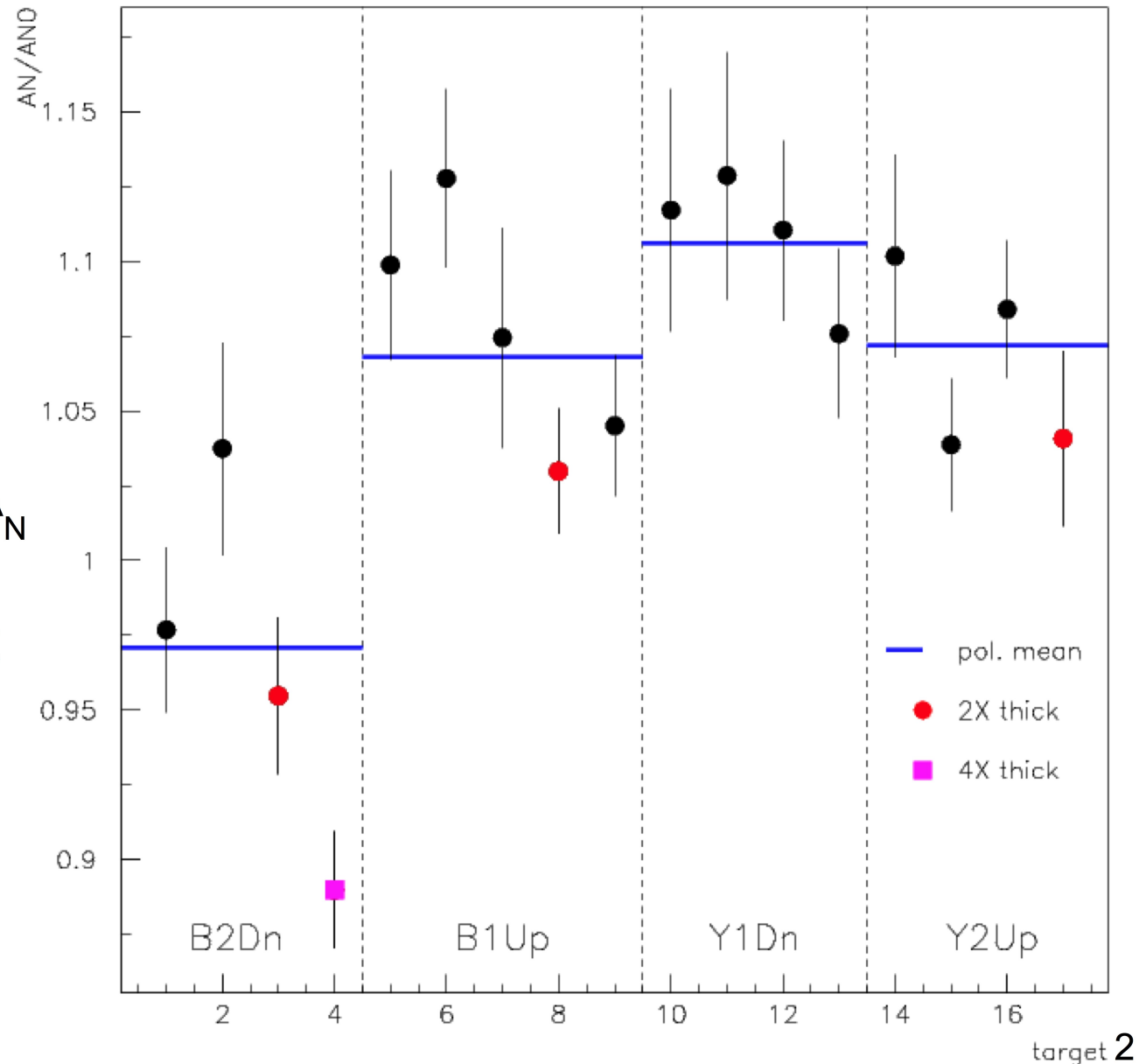


# $A_N$ etc. per pC target

- $A_N$  for all targets >3 fills; mean & stat. uncert. P0 fit:
- Relative to fixed  $A_{N0}$  (2004 100 GeV)
- Blue lines are mean  $A_N$  each polar.

## 1<sup>st</sup> observation:

- Thick targets lower  $A_N$
- Consistent with:
  - ⇒ more E-loss in target
  - ⇒ fixed E-detected
  - ⇒ higher E-scattered
  - ⇒ lower  $A_N$



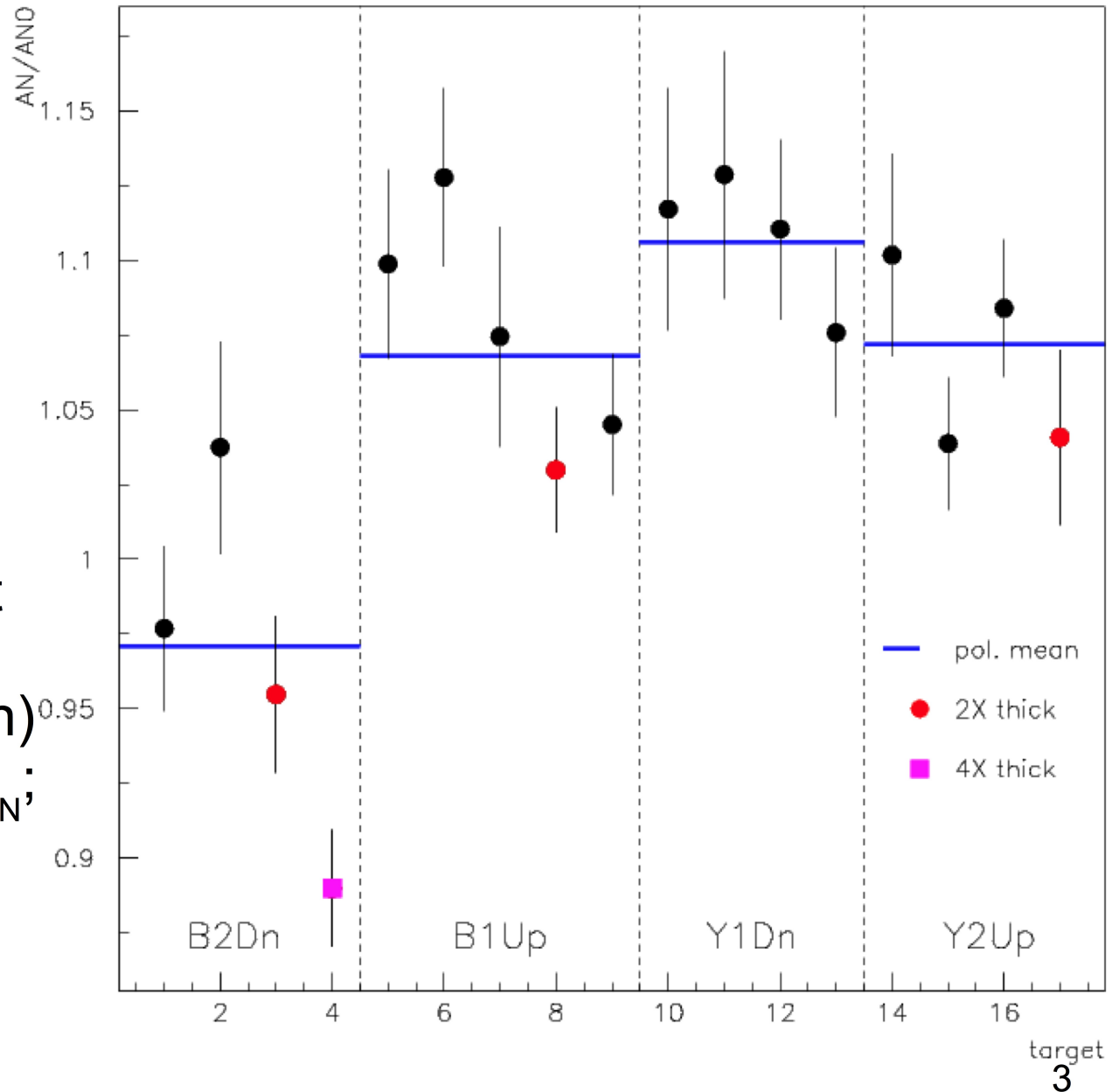
# $A_N$ etc. per pC target

- $A_N$  for all targets  $>3$  fills normalized
- Relative to fixed  $A_{N0}$  (2004 100 GeV)

- Blue lines are mean  $A_N$  each polar.

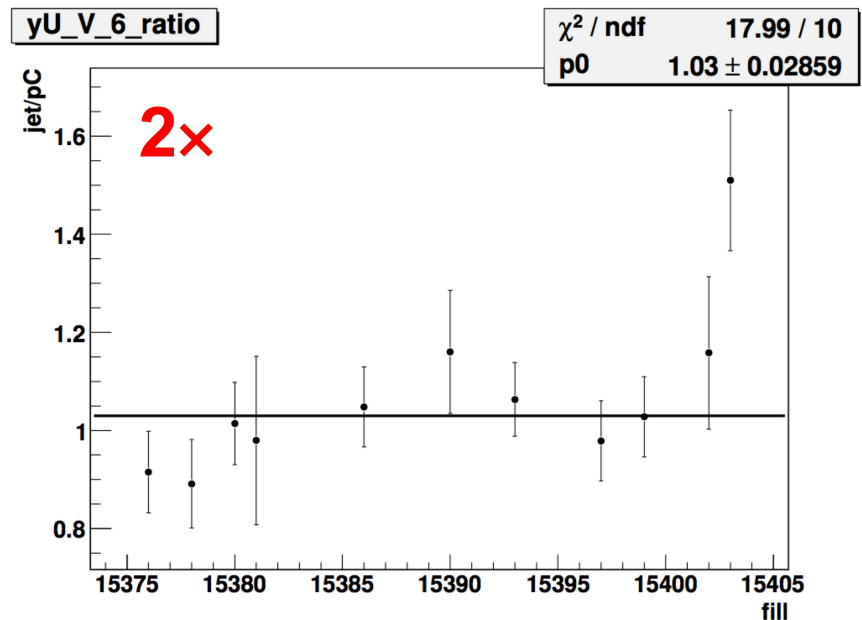
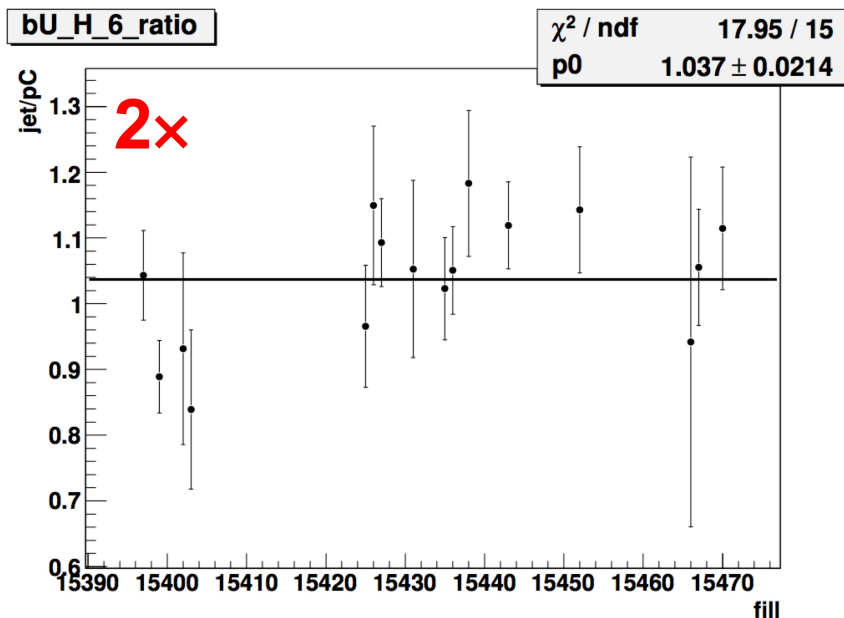
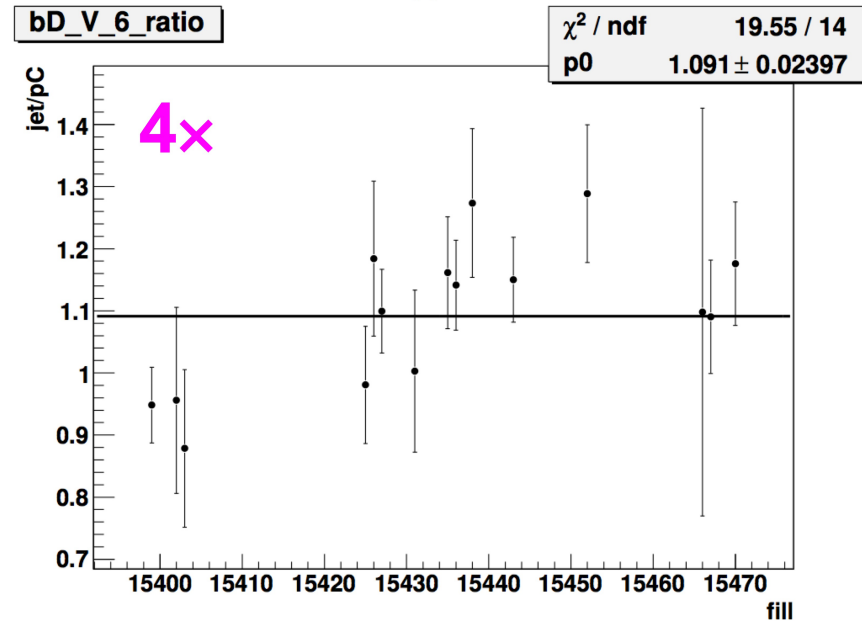
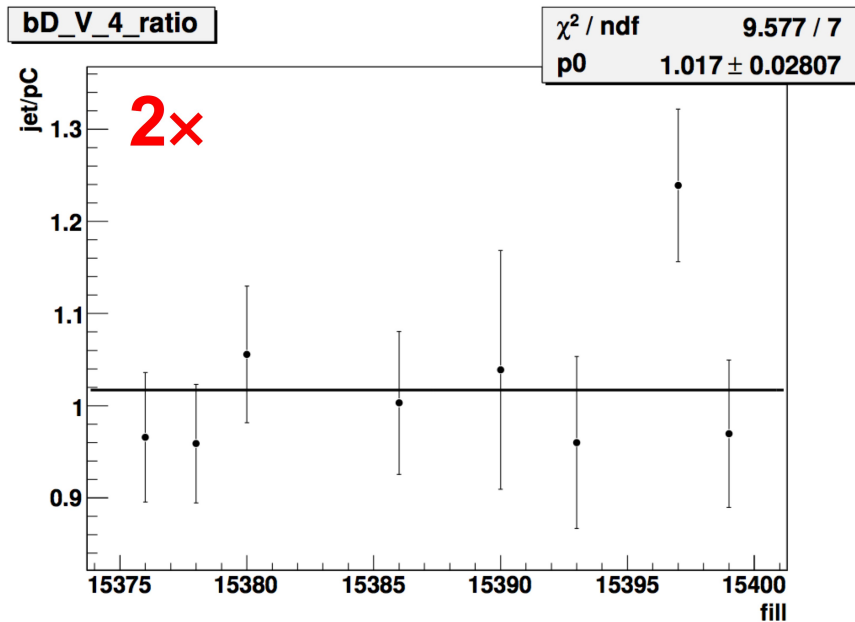
## 2<sup>nd</sup> observation:

- Mean for each polar. ~consistent each target (except B2Dn, thick targets pull mean down)
- Mean each polar. OK  $A_N$ ; perhaps separate  $A_N$  for thick targets?



# Thick targets

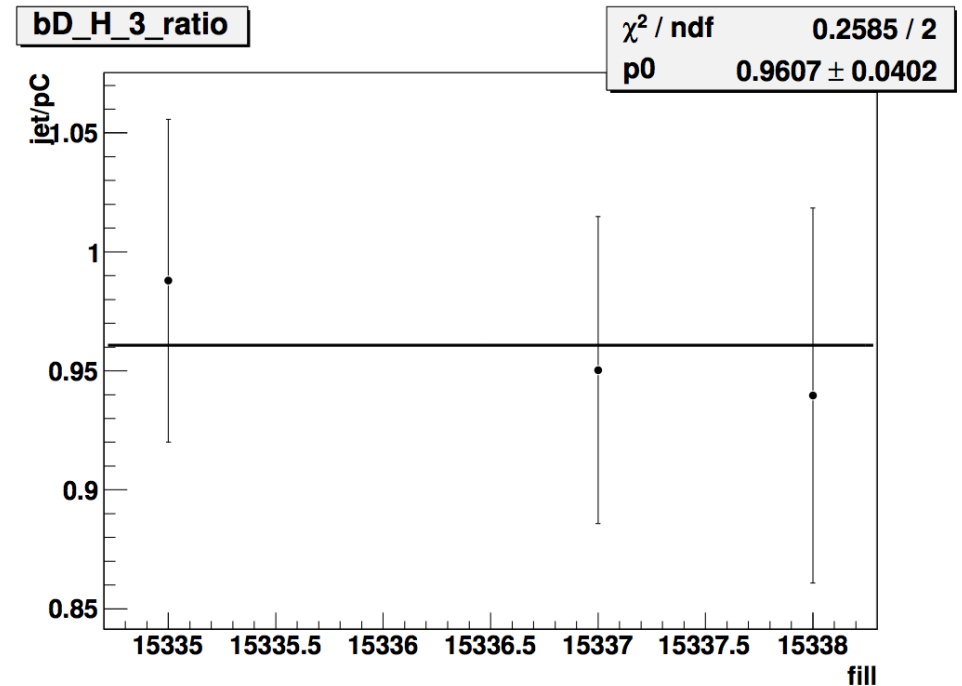
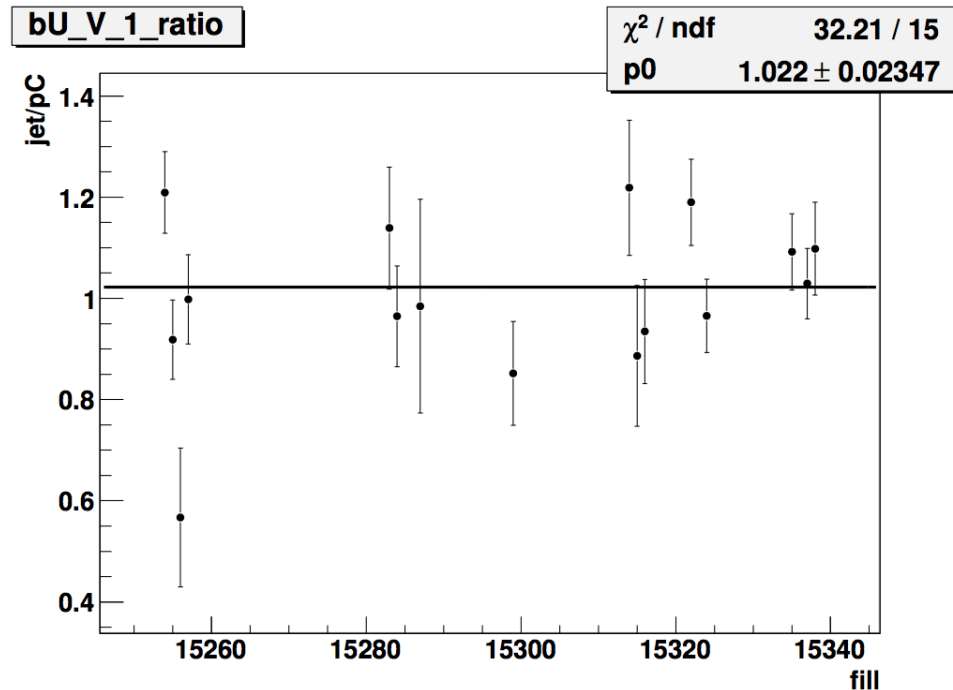
- Thick targets more susceptible to orientation  $\rightarrow A_N$  instability



- Thick targets  $\sim$ same scatter in  $A_N$  as thin (compare slide 1)

# Loose targets

- “Young Bill” Christie reported a few loose targets; from Alan's set:



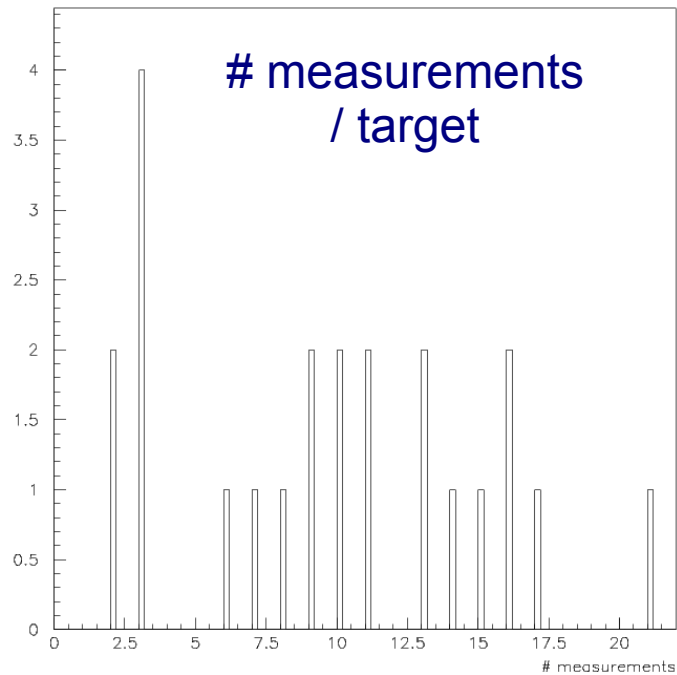
- No anomalous scatter in  $A_N$

# Summary

- Thick targets have lower  $A_N$ , as expected from E-loss in target
- For 1x thin targets, ~same  $A_N$  each polarimeter
  - one  $A_N$  each polar. ~OK
  - Separate  $A_N$  for thick targets?
  - Motivation to *not* experiment with thick targets...
- From one loose target: no anomalous scatter in  $A_N$

**Extras**

# Measurements, $\chi^2$ , NDOF



from P0 (constant) fits:

